

CLAIMS

1. A stackable module for a processor system, the module comprising:
 - a support plate having a topside and an underside;
 - a set of topside circuit components mounted on the topside of the support plate, the circuit components constituting a transport stream generating device that generates transport stream data and transport stream control signals;
 - a topside connector mounted to the topside of the support plate;
 - an underside connector mounted to the underside of the support plate;and
 - a first set of conductive tracks connected directly between the topside connector and the underside connector and a second set of conductive tracks connecting the topside connector to the set of topside circuit components, the underside connector and the topside connector being engageable with respective underside connectors and topside connectors of other modules, the first and second set of conductive tracks arranged to convey the transport stream data and the transport stream control signals in a stack of modules.
2. The stackable module of claim 1 wherein each of the topside and underside connectors comprises a set of pins for carrying memory access signals to enable the module to function as an external memory interface.
3. The stackable module of claim 1 wherein the topside connector is a receptacle and the underside connector is a plug.
4. The stackable module of claim 1 wherein the support plate comprises at least one through-hole for receiving a support pillar.

5. The stackable module of claim 4 wherein the support pillar is provided on the support plate at a location so as to pass through a through-hole of an upper module in a stack of modules.

6. The stackable module of claim 1, comprising a connector space defining a component that extends from the support plate by a distance calculated to define the minimum spacing in a stack of modules.

7. The stackable module of claim 1 wherein said circuit components further comprise a device that acts on the transport stream data and the transport stream control signals.

8. The stackable module of claim 7, comprising a multiplexor for selectively selecting the transport stream data from a lower module in the stack and an upper module in the stack for acting on by said device.

9. The stackable module of claim 1 wherein the circuit component further comprises a device that does not utilize the transport stream data and the transport stream control signals, said transport stream data and control signals supplied via said topside and underside connectors directly to another module in a stack of modules.

10. A stack of modules in a processor system, said stack comprising:
a main board having an interface connector and a set of main board components, the interface connector providing a set of pins for conveying transport stream data and transport stream control signals;
at least one module comprising a support plate with an underside connector mounted to an underside of said support plate and a topside connector mounted to a topside of said support plate, the at least one module comprising a

transport stream generating device configured to generate the transport stream data and the transport stream control signals, the underside connector being connected to the interface connector of the main board for conveying the transport stream data and the transport stream control signals from the at least one module to the interface connector of the main board.

11. A stack of modules in a processor system, said stack comprising:
 - a main board having an interface connector and a set of main board components, the interface connector providing a set of pins for conveying transport stream data and transport stream control signals;
 - at least one module comprising:
 - a support plate having a topside and an underside;
 - a set of topside circuit components mounted on the topside of the support plate and comprising a transport stream generating device configured to generate the transport stream data and the transport stream control signals;
 - a topside connector mounted to the topside of the support plate;
 - an underside connector mounted to the underside of the support plate and connected to the interface connector of the main board; and
 - a first set of conductive tracks connected directly between the topside connector and the underside connector and a second set of conductive tracks connecting the topside connector to the topside circuit components, the underside connector and the topside connector being engaged with respective underside connectors and topside connectors of other modules in the stack, the first and second set of conductive tracks arranged to convey the transport stream data and the transport stream control signals in the stack of modules.

12. The stack of modules of claim 11 wherein the support plate of said at least one module comprises the topside having a set of topside circuit components.

13. The stackable module of claim 12 wherein said circuit components comprise a device that acts on the transport stream data and the transport stream control signals.

14. The stack of modules of claim 12 wherein said at least one module comprises a multiplexer for selectively selecting the transport stream data from a lower module in the stack and an upper module in the stack for acting on by said device.

15. The stack of modules of claim 12 wherein the circuit components comprise a device that does not utilize the transport stream data and the transport stream control signals, said transport stream data and control signals being supplied via said topside and underside connectors directly to another module in the stack of modules.

16. A stack of modules in a processor system, said stack comprising:
a main board having an interface connector and a set of main board components, the interface connector providing a set of pins for conveying transport stream data and transport stream control signals; and

a plurality of modules, each module comprising a support plate with an underside connector mounted to an underside of said support plate and a topside connector mounted to a topside of said support plate, each module comprising a transport stream generating device configured to generate the transport stream data and the transport stream control signals, the underside connector of a lower one of said modules connected to the interface connector of the main board for conveying the transport stream data and the transport stream control signals from said lower module to the interface connector of the main board.

17. A stackable module for a processor system, the module comprising:

- a support plate having a topside and an underside;
- a set of topside circuit components mounted on the topside of the support plate, said circuit components constitute a device which acts on transport stream data and transport stream control signals;
- a topside connector mounted to the topside of the support plate;
- an underside connector mounted to the underside of the support plate;
- a first set of conductive tracks connected directly between the topside connector and the underside connector and a second set of conductive tracks connecting the topside connector to the topside circuit components, the underside connector and the topside connector being engageable with respective underside connectors and topside connectors of other modules, the conductive tracks arranged to convey the transport stream data and the transport stream control signals in a stack of modules; and
- a multiplexor for selectively selecting the transport stream data from a lower module in the stack and an upper module in the stack for acting on by said device.

18. A stackable module for a processor system, the module comprising:

- a support plate having a topside and an underside;
- a set of topside circuit components mounted on the topside of the support plate;
- a topside connector mounted to the topside of the support plate;
- an underside connector mounted to the underside of the support plate;
- and
- a first set of conductive tracks connected directly between the topside connector and the underside connector and a second set of conductive tracks

connecting the topside connector to the topside circuit components, the underside connector and the topside connector being engageable with respective underside connectors and topside connectors of other modules, the conductive tracks arranged to convey transport stream data and transport stream control signals between modules in a stack of modules; and

wherein the circuit components constitute a device that does not utilize the transport stream data and the transport stream control signals, all of the transport stream data and the transport stream control signals being supplied via said topside and underside connectors directly to another module in the stack of modules.

19. A stackable printed circuitboard (PCB) configured for stacking on a motherboard and with other stackable printed circuitboards (PCBs) in combination, comprising:

at least one support pillar extending from a top surface of a PCB; and
at least one through-hole formed in the PCB and adapted to receive a support pillar from another stackable PCB.

20. A stackable module for a processor system, the module comprising:

a support plate having a topside, an underside, and at least one through-hole for receiving a support pillar;

a set of topside circuit components mounted on the topside of the support plate;

a topside connector mounted to the topside of the support plate;

an underside connector mounted to the underside of the support plate;

and

a first set of conductive tracks connected directly between the topside connector and the underside connector and a second set of conductive tracks connecting the topside connector to the set of topside circuit components, the underside

connector and the topside connector being engageable with respective underside connectors and topside connectors of other modules, the first and second set of conductive tracks arranged to convey the transport stream data and the transport stream control signals in a stack of modules.

21. The stackable module of claim 20 wherein each of the topside and underside connectors comprises a set of pins for carrying memory access signals to enable the module to function as an external memory interface.

22. The stackable module of claim 20 wherein the topside connector is a receptacle and the underside connector is a plug.

23. The stackable module of claim 22 wherein the support pillar is provided on the support plate at a location so as to pass through a through-hole of an upper module in a stack of modules.

24. The stackable module of claim 20, comprising a connector space defining a component that extends from the support plate by a distance calculated to define the minimum spacing in a stack of modules.

25. The stackable module of claim 20 wherein the circuit components constitute a transport stream generating device that generates the transport stream data and the transport stream control signals.

26. The stackable module of claim 20 wherein said circuit components constitute a device that acts on the transport stream data and the transport stream control signals.

27. The stackable module of claim 26, comprising a multiplexor for selectively selecting the transport stream data from a lower module in the stack and an upper module in the stack for acting on by said device.

28. The stackable module of claim 20 wherein the circuit component comprises a device that does not utilize the transport stream data and the transport stream control signals, said transport stream data and control signals being supplied via said topside and underside connectors directly to another module in a stack of modules.